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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/756,406 | 01/14/2004 | Tatsuya Tomioka | 247532USOXDIV | 2626 |
| 22850 | 7590 | 11/25/2005 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | BUTTNER, DAVID J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1712 | |
| DATE MAILED: 11/25/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/756,406

Applicant(s)

TOMIOKA ET AL.

Examiner

David Buttner

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6,8-10 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6,8-10 and 21-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 22-24 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims depend on a cancelled claim.

Claims 6,8-10,21-25,27,28 and 30-32 rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukahara EP 417775 in view of JP07025798.

Tsukahara exemplifies (#3,4) blends of polycarbonate and fatty acid monoglyceride for optical uses. The polycarbonate is based on BPA and has a low amount –OH termination. The MW is about 15,000. The unreacted components (ie the phenols) are lowered as much as possible by washing with acetone (page 4 line 20-25). Tsukahara does not report the amount non BPA phenolic impurities present when polymerizing the polycarbonate.

JP07025798 discloses a method of purifying BPA that is especially suitable for making polycarbonates in optical applications (see paragraph 2; abstract). Applicant (page 21 line 18) admits this reference's purification is the preferred method to reduce the non BPA phenolics.

It would have been obvious to employ polycarbonate derived from BPA purified by the technique of JP07025798 as the polycarbonate in Tsukahara's composition. Improved optical properties would be expected.

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Claims 6,8-10 and 21-32 rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukahara EP 417775 in view of JP07025798 in further view of Okamoto '653.

The Tsukahara/JP07025798 combination suggests the inclusion of phosphorous antioxidants (page 4 line 28 of EP417775), but not the amounts thereof. Okamoto (table 1) shows 50ppm of antioxidant is typical for optical polycarbonate compositions. It would have been obvious to include such an amount of antioxidant in Tsukahara's composition.

Claims 6,8-10 and 21-32 rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto '653 in view of JP07025798.

Okamoto exemplifies digital video substrates of polycarbonate, antioxidant and release agent. The MW of the polycarbonate is about 14,000. The polycarbonate is washed with water and acid (col 8 line 17-27). This is known to remove unreacted components. The polycarbonate has zero (or near zero) amounts of -OH endgroups, because "both" terminals have been endcapped with monophenols (col 4 line 33). Okamoto does not report the amount non BPA phenolic impurities present when polymerizing the polycarbonate.

JP07025798 discloses a method of purifying BPA that is especially suitable for making polycarbonates in optical applications (see paragraph 2; abstract). Applicant (page 21 line 18) admits this reference's purification is the preferred method to reduce the non BPA phenolics.

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It would have been obvious to employ polycarbonate derived from BPA purified by the technique of JP07025798 as the polycarbonate in Okamoto's composition. Improved optical properties would be expected.

Claims 6,8-10,21-25,27,28 and 30-32 rejected under 35 U.S.C. 103(a) as being unpatentable over Sakoda '799 in view of JP07025798.

Sakoda exemplifies optical disc substrates of polycarbonate having a low amount of -OH termination (table 1). Fatty acid monoglycerides can be added (col 4 line 67). The polycarbonate is purified by washing with acetone to remove unreacted components prior to molding (col 3 line 36). Sakoda does not report the amount non BPA phenolic impurities present when polymerizing the polycarbonate.

JP07025798 discloses a method of purifying BPA that is especially suitable for making polycarbonates in optical applications (see paragraph 2; abstract). Applicant (page 21 line 18) admits this reference's purification is the preferred method to reduce the non BPA phenolics.

It would have been obvious to employ polycarbonate derived from BPA purified by the technique of JP07025798 as the polycarbonate in Sakoda's composition. Improved optical properties would be expected.

Applicant's arguments filed 10/11/05 have been fully considered but they are not persuasive.

Applicant states the examiner has indicated allowability of certain claims if rewritten in independent form.

The examiner has made no such indication.

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Applicant argues none of the references suggest reducing the free phenol content to <80ppm.

None of the references actually bother to measure and report their free phenol content. However, all suggest washing their polycarbonate before molding. This washing removes impurities such as unreacted components (eg phenols). Tsukahara and Sakoda both suggest washing with acetone. This is the same technique applicant uses in example I-1 to reduce the phenol content. It is assumed the references washing techniques inherently lower the free phenol content to applicant's levels.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Buttner whose telephone number is 571-272-1084. The examiner can normally be reached on weekdays from 10 to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAVID J. BUTTNER
PRIMARY EXAMINER

David Buttner

7/6/05

